AMENDMENTS TO THE CLAIMS

1.   (Currently Amended) A computer implemented collaboration system comprising:

a data management tier including at least one data source;

a repository tier including at least one repository server associated with said at least one data source and enabled for accessing data items within said at least one data source using access methods native to said at least one data source to create at least one document including data items selected from said at least one data source, said at least one document being associable with at least one conference accessible to a plurality of participants;

a user interface tier including at least one client tool enabled for displaying the data items within said at least one data source in client tool interfaces displayable on ~~a~~at least one user terminal connectable with said computer implemented collaboration system;

a services tier including at least one data channel server associated with said at least one document, said at least one data channel server being created when said at least one document is associated with said at least one conference, said at least one data channel server providing an interface between said at least one repository server and said at least one client tool; and

at least one extended property associated with each data item within said at least one data source, said at least one extended property being maintained within said at least one data channel server and available for display by said at least one client tool only within said at least one conference with which said at least one document is associated, wherein said at least one client tool is enabled to change said at least one extended property associated with each data item, and wherein changes made to said at least one extended property associated with each data item in one of the client tool interfaces are reflected in the other client tool interfaces by changing an instance of said at least one extended property in said at least one conference with which the document is associated.

2.   (Original) The computer implemented collaboration system of claim 1 wherein said at least one extended property comprises one of a visualization property and a control property for use in displaying the data items with said at least one client tool.

3.   (Original) The computer implemented collaboration system of claim 1 comprising

a plurality of client tools enabled for displaying the data items within said at least one data source.

4.   (Original) The computer implemented collaboration system of claim 3 wherein said plurality of client tools include a map viewer, a list viewer, and an X-Y data plotter.

5.   (Currently Amended) The computer implemented collaboration system of claim 1 further comprising:

a query viewing client tool enabled for use in constructing queries for selecting data from said at least one data source meeting particular criteria;

a library server providing an interface between said query viewing client ~~application~~tool and said at least one repository server.

6.   (Original) The computer implemented collaboration system of claim 5 wherein said query viewing client tool is enabled for use in constructing at least one of a standing query and a static query.

7.   (Original) The computer implemented collaboration system of claim 1 further comprising:

a conference manager client tool enabled for managing communication between multiple user terminals connectable with said computer implemented collaboration system.

8.   (Original) The computer implemented collaboration system of claim 1 wherein said at least one extended property is maintained in said at least one data channel server in a directed a-cyclic graphical form.

9.   (Original) The computer implemented collaboration system of Claim 1 wherein said at least one repository server, said at least one client tool, and said at least one data channel server are implemented within a CORBA framework.

10.   (Withdrawn) A computer implemented method for collaborative access to and

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manipulation of data items within at least one data source, said method comprising the steps of:

creating a document representing data items from said at least one data source;

associating the document with at least one conference, said at least one conference being accessible to at least one user terminal;

displaying the data items within the document on said at least one user terminal user terminal; and

maintaining an instance of at least one extended property associated with each data item represented in the document, wherein the instance of at least one extended property is only available within said at least one conference with which the document is associated.

11.   (Withdrawn) The computer implemented method of claim 10 wherein said creating step comprises the step of:

executing a static query of said at least one data source to identify data items meeting specified query criteria.

12.   (Withdrawn) The computer implemented method of claim 10 wherein said creating step comprises the step of:

periodically executing a standing query of said at least one data source to identify data items meeting specified query criteria.

13.   (Withdrawn) The computer implemented method of claim 10 wherein said creating step comprises the step of:

executing a standing query of said at least one data source to identify data items meeting specified query criteria, wherein the standing query is executed as new data arrives.

14.   (Withdrawn) The computer implemented method of claim 10 wherein said associating step comprises the step of:

using a pointing device to drag and drop a representation, displayed on the user terminal, of the document onto a representation, displayed on the user terminal, of said at least one conference.

15.   (Withdrawn) The computer implemented method of claim 10 wherein in said step of

maintaining, said at least one extended property comprises one of a visualization property and a control property for use in displaying the data items on said at least one user terminal in said displaying step.

16.   (Withdrawn) The computer implemented method of claim 10 wherein said step of displaying comprises:

displaying the same data items on the same user terminal within separate interfaces associated with separate client tools enabled for displaying the data items and changing said at least one extended property associated with each data item.

17.   (Withdrawn) The computer implemented method of claim 16 further comprising the step of:

reflecting a change made to said at least one extended property associated with each data item using one of the client tools in the interfaces of the other client tools without direct communication between the client tools by changing the instance of said at least one extended property said at least one conference with which the document is associated.

18.   (Withdrawn) The computer implemented method of claim 10 wherein said step of displaying comprises:

displaying the same data items on separate user terminals within interfaces on the separate user terminals associated with client tools enabled for displaying the data items and changing said at least one extended property associated with each data item.

19.   (Withdrawn) The computer implemented method of claim 18 further comprising the step of:

reflecting a change made to said at least one extended property associated with one of the data items using one of the client tools in the interfaces of the other client tools without direct communication between the client tools by changing the instance of said at least one extended property in said at least one conference with which the document is associated.

20.   (Withdrawn) A collaboration system infrastructure for communication between

computer users comprising:

a plurality of user terminals;

first means to create first information by each of said plurality of user terminals in a first selected format;

second means to distribute the information to other of said plurality of user terminals on demand in formats selected by said receiving terminals; and

third means to modify said first information by said other user terminals.

21.   (Withdrawn) The collaboration system infrastructure of claim 20 wherein said first means comprise an information access tier having at least one repository component, said at least one repository component being associated with at least one data source and enabled for accessing data within its associated data source using access methods native to its associated data source, said at least one repository component being enabled for creating at least one document representing data items from said at least one data source.

22.   (Withdrawn) The collaboration system infrastructure of claim 21 wherein said second means comprise a services tier having at least one data channel component providing an interface between said first means and said third means.

23.   (Withdrawn) The collaboration system infrastructure of claim 22 wherein said third means comprise a user interface tier having at least one client tool component enabled for displaying the data within said at least one data source on the plurality of user terminals.

24.   (Withdrawn) The collaboration system infrastructure of claim 23 wherein said services tier supports extended properties for visualization and control of the data by said at least one client tool component without affecting the data in said at least one data source.

25.   (Withdrawn) The collaboration system infrastructure of claim 24 wherein said services tier supports a plurality conferences in which a plurality of participants to different conferences may view data based on the same document, each said conference supporting different extended properties for visualization and control of the data.

26. (Withdrawn) The collaboration system infrastructure of claim 25 wherein said user interface tier supports real time viewing of the data represented in a document and said extended properties as changes are made to the data.

27. (Currently Amended) A computer implemented collaboration system comprising:

at least one repository server associated with at least one data source and enabled for accessing data items within said at least one data source using access methods native to said at least one data source;

at least one document server providing at least one interface for creating a plurality of documents, each document representing selected data items within said at least one data source and being associable with at least one conference;

at least one client tool enabled for displaying the data items represented by each document in client tool interfaces displayable on aat least one user terminal connectable with said computer implemented collaboration system; and

at least one data channel server providing an interface between said at least one repository server and said at least one client tool, said at least one data channel server being created upon association of a document with a conference and further enabled for maintaining an instance of at least one extended property associated with each data item represented in a document, wherein the extended properties are available for display by said at least one client tool only within a conference with which a particular document is associated, wherein said at least one client tool is enabled to change said at least one extended property associated with each data item, and wherein changes made to said at least one extended property associated with each data item in one of the client tool interfaces are reflected in the other client tool interfaces by changing the instance of said at least one extended property in said at least one conference with which the document is associated.

28. (Currently Amended) The computer implemented collaboration system of claim 27 further comprising:

a query viewing client tool enabled for use in constructing queries for selecting data items from said at least one data source meeting particular criteria; and

a library server providing an interface between said query viewing client ~~application~~tool and said at least one repository server.

29.   (Previously Presented) The computer implemented collaboration system of claim 28 wherein said query viewing client tool is enabled for use in constructing at least one of a standing query and a static query, wherein a document representing data items selected as a result of a standing query is updated when the selected data items change.

30.   (Previously Presented) The computer implemented collaboration system of claim 27 further comprising:

at least one conference manager client tool enabled for managing communication between multiple user terminals connectable with said computer implemented collaboration system, each said document being placed within a conference managed by said at least one conference manager client tool.

31.   (Previously Presented) The computer implemented collaboration system of claim 27 wherein said at least one extended property comprises one of a visualization property and a control property for use in displaying the data items with said at least one client tool.

32.   (Previously Presented) The computer implemented collaboration system of claim 27 wherein said at least one client tool is selected from a group consisting of a map viewer, a list viewer, and an X-Y data plotter.

33.   (Previously Presented) The computer implemented collaboration system of claim 27 wherein said at least one extended property is maintained in said at least one data channel server in a directed a-cyclic graphical form.

34.   (Previously Presented) The computer implemented collaboration system of Claim 27 wherein said at least one repository server, said at least one document server, said at least one client tool, and said at least one data channel server are implemented within a CORBA framework.